# DRAFT
# SITE ASSESSMENT REPORT
# FOR
# THE SKINNER LANDFILL SITE
# WEST CHESTER, BUTLER COUNTY, OHIO

**NPL STATUS: NON-NPL**

Prepared for:

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
Emergency Response Branch
26 West Martin Luther King Drive (G41)
Cincinnati, Ohio 45268

Prepared by:

**WESTON SOLUTIONS, INC.**
714 East Monument Drive
Dayton, Ohio 45402

| | |
|---|---|
| Date Prepared | May 6, 2008 |
| TDD Number | S05-0001-0803-005 |
| Document Control Number | 398-2A-ABZV |
| Contract Number | EP-S5-06-04 |
| START Project Lead | Timothy J. Smith |
| Telephone Number | (937) 531-4400 |
| U.S. EPA On-Scene Coordinator | Kathy Clayton |

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714 East Monument Drive
Dayton, Ohio 45402

May 6, 2008

Prepared by: _____ Date: _____
Timothy J. Smith
WESTON START Project Lead

Approved by: _____ Date: _____
Frank Beodray
WESTON START Project Manager

Approved by: _____ Date: _____
Pamela Bayles
WESTON START Program Manager

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# LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| CFR | Code of Federal Regulations |
| HASP | Health and Safety Plan |
| NCP | National Oil and Hazardous Substances Pollution Contingency Plan |
| OEPA | Ohio Environmental Protection Agency |
| OSC | On-Scene Coordinator |
| ppm | Parts per million |
| START | Superfund Technical Assessment and Response Team |
| TCLP | Toxicity Characteristic Leaching Procedure |
| TDD | Technical Direction Document |
| TSC | Tri State Computers |
| U.S. EPA | United States Environmental Protection Agency |
| WESTON | Weston Solutions, Inc. |

# 1.0 INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc., (WESTON®) Superfund Technical Assessment and Response Team (START) to assist U.S. EPA On-Scene Coordinators (OSCs) Mr. Steven Renninger and Ms. Kathy Clayton in performing a site assessment at Skinner Demolition and Container, 8740 Cincinnati Dayton Road, West Chester, Butler County, Ohio (Site). U.S. EPA requested that WESTON START conduct a site assessment under Technical Direction Document number S05-0001-0803-005; prepare a health and safety plan (HASP); collect samples of crushed glass and soil; collect photographic documentation; and evaluate threats to human health, welfare and the environment posed by the Site. Under the direction of U.S. EPA OSCs Renninger and Clayton, a site assessment was conducted on March 25, 2008.

This site assessment report is organized into the following sections:

- **Introduction** – Provides a brief description of the objective and scope of site assessment activities.
- **Site Background** – Describes the Site and its history.
- **Site Assessment Activities** – Discusses the methods and procedures used during the site reconnaissance and assessment.
- **Analytical Results** – Discusses the analytical results of the samples collected during the removal assessment.
- **Threats to Human Health and the Environment** – Identifies conditions at the Site that warrant a removal action under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).
- **References** – Provides a list of the references consulted in creating this report.

# 2.0 SITE BACKGROUND

## 2.1 SITE DESCRIPTION

The Site is owned by Mr. Ray Skinner; who is doing business as Skinner Demolition and Container at the Site. The property also contains and is bordered to the north and east by a landfill, the Skinner Landfill, which was a previous Superfund Site; and to the south by the East Fork of Mill Creek, and south and west by a junk yard also owned and operated by Mr. Skinner. Access to the Site is limited to a private, unimproved roadway.

## 2.2 SITE HISTORY

In December 2007, the Ohio Environmental Protection Agency (OEPA) investigated a complaint concerning 73 one-yard boxes and a super-sack of crushed computer monitor glass that was staged outside the Site's fence, but on the Skinner Landfill property. These boxes are Department of Transportation-approved shipping containers sometimes referred to as Tri-wall, implying three–layers, 3/16-inch-thick cardboard construction. The investigation resulted in contacts with the glass waste generator, Tri State Computers (TSC), and the owner/operator of the salvage yard housing the material, Mr. Ray Skinner. The OEPA file indicates a discrepancy in the final transportation and disposal of the material placed by TSC at the Skinner Landfill. TSC's owner stated that Mr. Skinner was hired to properly dispose of the glass. Mr. Skinner stated that he was only providing TSC with courtesy storage until TSC completed renovations of a storage building on his property. Neither party claimed ownership of the computer glass. After several months of follow up and correspondence by OEPA, OEPA Division of Hazardous Waste Management finally received notice that TSC had filed for bankruptcy.

In December 2007, OEPA conducted a site assessment sampling event at the Site. Three composite

samples of the monitor glass were collected and submitted for Toxicity Characteristic Leaching Procedure (TCLP) lead analyses. The TCLP laboratory results indicated TCLP lead concentrations of the three crushed glass samples collected by OEPA contained 93, 162, and 185 parts per million (ppm) lead. These concentrations exceed the 5 ppm TCLP regulatory limit for lead listed in the 40 Code of Federal Regulations (CFR) Part 261.24, Table 1 Maximum Concentration of Contaminants for the Toxicity Characteristic. Based on these results, the crushed computer monitor glass is, therefore, characterized as hazardous waste.

On March 13, 2008, OEPA requested U.S. EPA assistance in conducting a site assessment to confirm their results in preparation for time-critical removal action at the Site.

# 3.0 SITE ASSESSMENT ACTIVITIES

## 3.1 SITE ASSESSMENT

On March 25, 2008, WESTON START member Mr. Tim Smith accompanied U.S. EPA OSC Clayton to the Site from WESTON's Miamisburg office. U.S. EPA and WESTON START met with Mr. Jeff Smith of OEPA at the Site who observed the sampling and provided technical support. The site-specific HASP prepared by START was reviewed and signed by all present. A site reconnaissance was conducted and photographs were taken. An InnovX lead analyzer was used to survey soil lead levels in close proximity to the containers of glass. Lead concentrations of 19 to 98 ppm were recorded at various locations near the boxes of crushed glass. The walls of a few of the boxes had collapsed, and failed structurally and the crushed glass contents had spilled onto the ground. The spilled glass was moved aside to provide clear access to the soil which was surveyed with the lead analyzer at two locations. Screening results in these areas were 328 and 703 ppm lead, and follow-up grab samples of soil were collected for laboratory analyses. Composite crushed glass samples were also collected from representative groups of boxes. Details of the sampling efforts are

described in more detail in the following section.

## 3.2 SAMPLING ACTIVITIES

On March 25, 2008, WESTON START collected two soil grab samples; one from each of the screened areas. Each sample was collected from the top half-inch of soil at each location (Figures 3.1 and 3.2) and placed in separate sample jars. Two representative composite samples were also collected from the crushed computer monitor glass from four directionally designated groups of boxes. The first crushed glass composite sample, SLF-G-01-032508, was collected from the north and east groups of boxes,; and a second composite sample, SLF-G-02-032508 , was collected from the south and west groups of boxes (Figure 3.2). Sample descriptions are summarized in the table below. The nomenclature used to identify each sample is: SLF- Skinner landfill, G-glass or S-soil followed by the sample date for reference.

**Table 3-1**
**Skinner Landfill Site**
**WESTON START Sample Summary**
**March 25, 2008**

| Sample ID Number | Media Sampled | Sample Description |
|---|---|---|
| SLF-S-01-032508 | Soil | Grab sample of soil taken beneath an area of crushed glass that had spilled onto the ground in the west container area |
| SLF-S-02-032508 | Soil | Grab sample of soil taken beneath an area of crushed glass that had spilled onto the ground in the north container area |
| SLF-G-01-032508 | Glass | Composite sample of crushed glass from the north and east areas of containers |
| SLF-G-02-032508 | Glass | Composite sample of crushed glass from the south and west areas of containers |

Notes:
START – Superfund Technical Assessment and Response Team
WESTON – Weston Solutions, Inc.

Following the completion of sampling activities, the sample containers were decontaminated and labeled. Samples were hand-delivered by WESTON START to DataChem Laboratories, located at 4388 Glendale-Milford Road, Cincinnati, Ohio. The soil samples were tested for TCLP metals and total metals. The glass samples were submitted for TCLP metals analysis.

## 4.0 ANALYTICAL RESULTS

Laboratory analytical results for the collected samples presented in Table 3-2 were compared to 40 CFR,Part 261.24, Table 1 to identify exceedences. Table 3-2 summarizes the results of the four samples collected by START. The first two columns contain the soil sampling results and the second two columns contain the glass sampling results.

**Table 3-2**
**Skinner Landfill Site**
**WESTON START Summary of Sampling Results**
**March 25, 2008**

| Analyte | SLF-S-01-032508 | SLF-S-02-032508 | SLF-G-01-032508 | SLF-G-02-032508 |
|---|---|---|---|---|
| Total Lead | 10 ppm | 180 ppm | Not Analyzed | Not Analyzed |
| TCLP Barium | 0.82 ppm | 0.60 ppm | 9.6 ppm | 6.8 ppm |
| TCLP Lead | ND | 0.34 ppm | **400 ppm** | **240 ppm** |

Notes:
**Red values** – Exceed regulatory limit per 40 Code of Federal Regulations Part 261.24, Table1.
ppm – parts per million
START – Superfund Technical Assessment and Response Team
TCLP – toxicity characteristic leaching procedure
WESTON – Weston Solutions, Inc.

TCLP results for all other Resource Conservation and Recovery Act metals were at or below the laboratory detection limit of 0.10 ppm. Appendix B contains the Laboratory Analytical Report.

## 5.0 THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Factors to be considered in determining the appropriateness of a potential removal action at a site are delineated in the NCP in 40 CFR 300.415(b) (2). A summary of the factors applicable to the Site are presented below.

- **Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.**

Laboratory test results indicate concentrations of lead in computer monitor glass in containers and spilled onto the ground at the Site exceed criteria for a characteristic hazardous waste as defined in 40 CFR Part 261.24. Field screening and analytical results indicate that soil adjacent to the containers of glass contains elevated concentrations of lead. These results may indicate that lead is leaching from the monitor glass into surrounding soil, or particles of lead-coated glass are mixing into the top soil in the area. The resultant contaminated top soil provides an inhalation hazard that could potentially be generated in dust. Canada Geese were observed nesting in the area and could come into contact with the contaminated soil or glass. The site is not fenced in and could be accessed by people and animals.

- **Actual or potential contamination of drinking water supplies or sensitive ecosystems.**

Measurable amounts of lead contamination are already present in the soil in close proximity to the computer monitor glass which can eventually migrate vertically into the uppermost groundwater table. The east Fork of Mill Creek is located to the south less than one hundred yards away and could eventually be impacted by storm water run off from the site.

- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release.**

The 74 containers of leaded computer glass vary in structural integrity. A few containers have already released leaded glass to the soil and sampling results indicate that the soil has been cross-

contaminated with lead due to proximity and contact. Several other unprotected boxes and a super-sack filled with computer monitor glass remain on-site and pose a threat of release to the environment. Analytical results confirmed that the computer glass is a characteristic hazardous waste.

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.**

Future storm events will likely further damage the cardboard boxes containing the computer monitor glass. This will cause continual release of the hazardous waste to the ground, resulting in additional cross-contamination of the adjacent soil and surrounding environment.

- **The availability of other appropriate federal or state response mechanisms to respond to the release.**

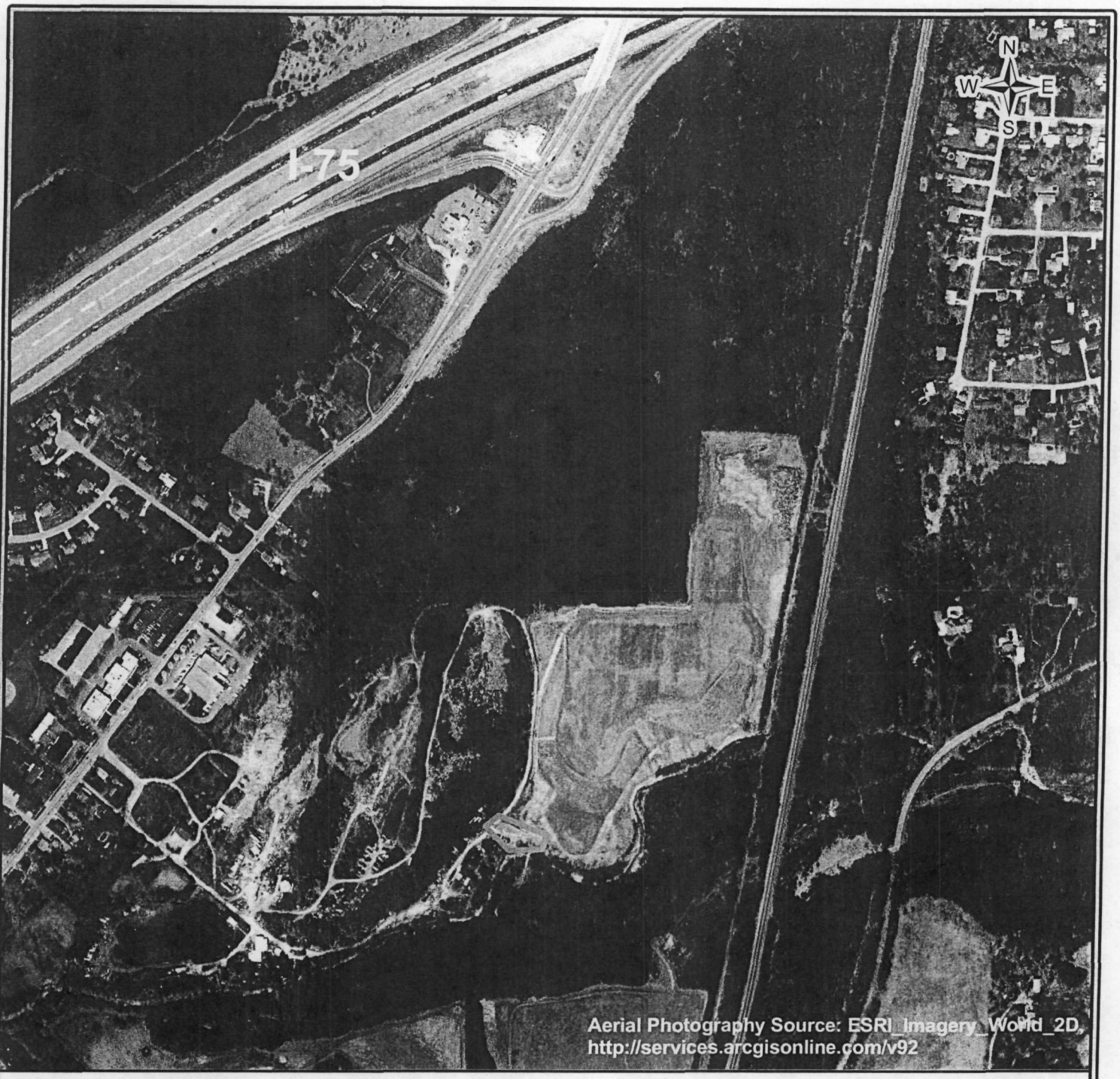
OEPA requested U.S. EPA assistance in performing a time-critical removal assessment to evaluate the need for federal involvement to address imminent threats posed by the Site. Neither OEPA nor any other local government agency has adequate finances or resources to respond to a time-critical removal action to mitigate the on-site threats.

## 6.0 REFERENCES

Maximum Concentration of Contaminants for the Toxicity Characteristic, 40 CFR, Part 261.24, Table 1.

National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR 300.415(b) (2).

# FIGURES





**Legend**

Site Location

Figure 1-1

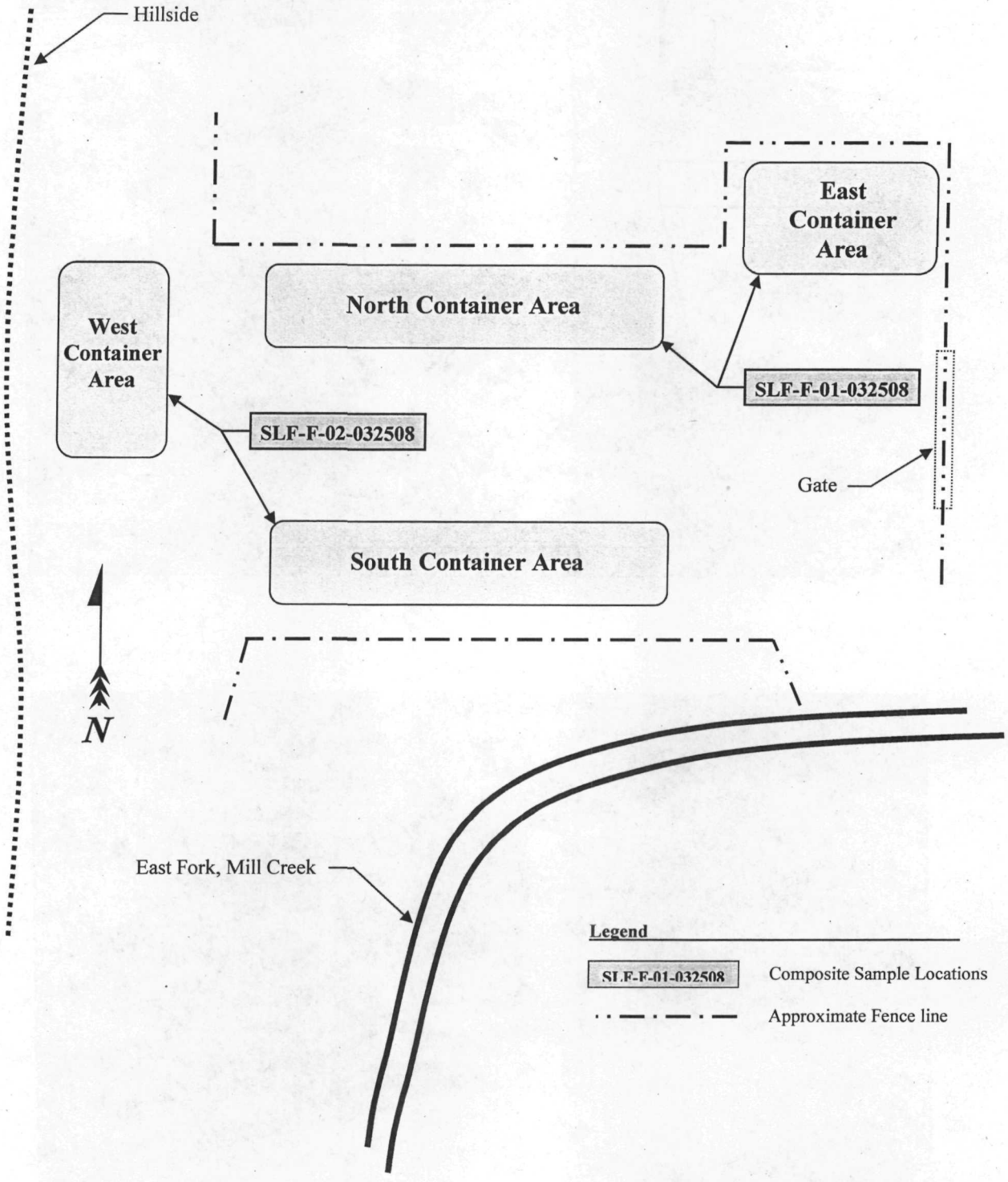
Prepared for:
**U.S. EPA REGION V**
Contract No: EP-S5-06-04
**TDD No:** 398-2A-ABZV
**DCN No:** S05-0001-0803-005

Prepared by:
**WESTON SOLUTIONS, INC.**
10200 Alliance Road, Suite 150
Cincinnati, OH 45242

SITE LOCATION MAP
SKINNER LANDFILL SITE
WEST CHESTER, BUTLER COUNTY, OHIO
May 6, 2008
Scale 0 250 500 Feet

## Figure 3-1
## Skinner Soil Sampling Locations

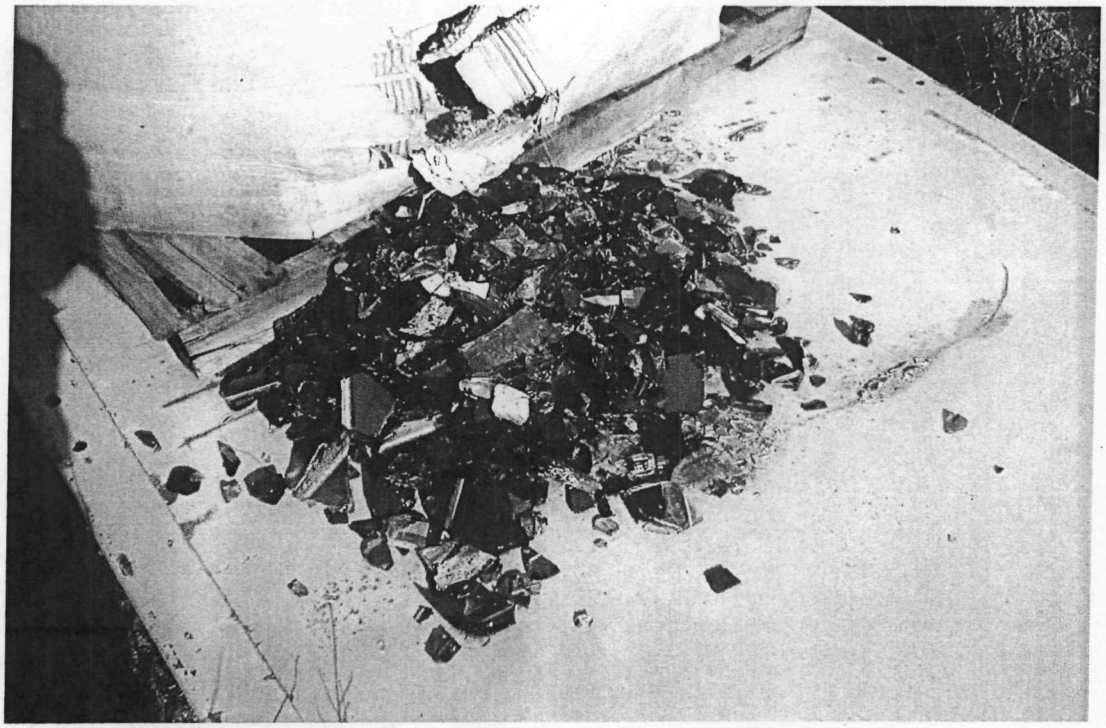

# Figure 3-2
# Skinner Landfill Glass Sampling Locations



# APPENDIX A

# PHOTO DOCUMENTATION

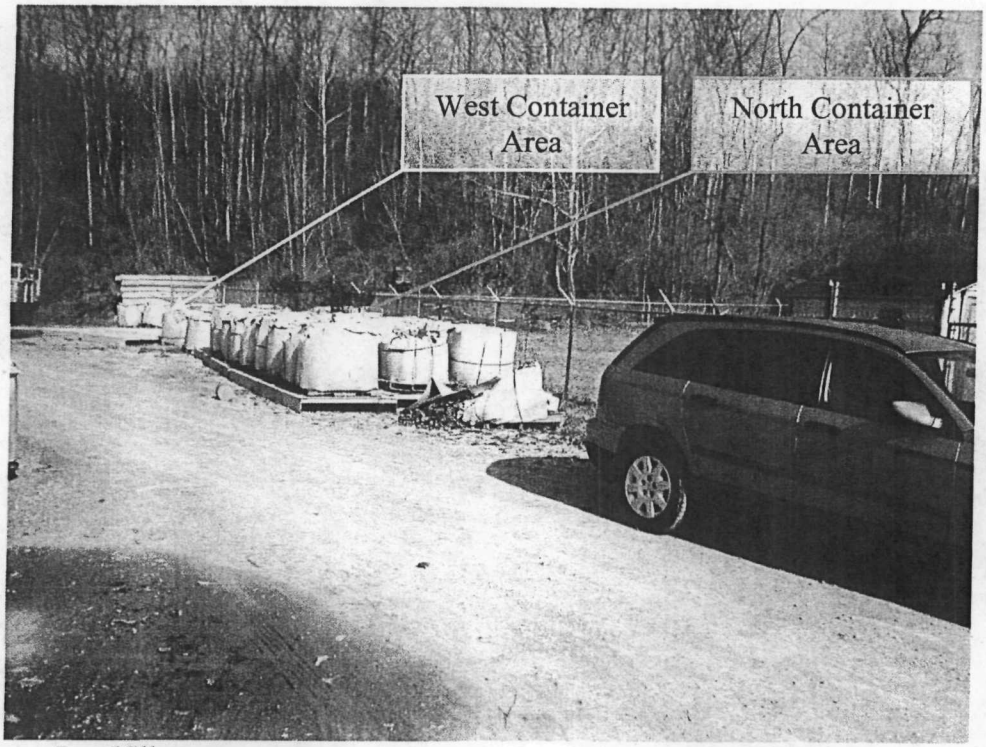
**Site:** Skinner Landfill
**Photo Number:** 01 **Date:** March 25, 2008
**Direction:** Northwest **Photographer:** Tim Smith
**Subject:** Cardboard one-yard containers in the east container area, south of Skinner Landfill fence



**Site:** Skinner Landfill
**Photo Number:** 02 **Date:** March 25, 2008
**Direction:** Northwest **Photographer:** Tim Smith
**Subject:** Computer monitor glass spilled from the failed container on the right side of Photo 01


**Site:** Skinner Landfill
**Photo Number:** 03 **Date:** March 25, 2008
**Direction:** North **Photographer:** Tim Smith
**Subject:** Cardboard containers filled with crushed computer monitor glass in the east area


**Site:** Skinner Landfill
**Photo Number:** 04 **Date:** March 25, 2008
**Direction:** West **Photographer:** Tim Smith
**Subject:** North (right) and south (left) crushed computer monitor glass container areas




**Site:** Skinner Landfill
**Photo Number:** 05 **Date:** March 25, 2008
**Direction:** Northwest **Photographer:** Tim Smith
**Subject:** North container area with west container area in the background

**Site:** Skinner landfill
**Photo Number:** 06 **Date:** March 25, 2008
**Direction:** Northwest **Photographer:** Tim Smith
**Subject:** Spilled crushed computer monitor glass from a failed container in north area

**Site:** Skinner Landfill
**Photo Number:** 07 **Date:** March 25, 2008
**Direction:** Southwest **Photographer:** Tim Smith
**Subject:** Cardboard containers and a "super sack" filled with crushed glass in the south area

**Site:** Skinner Landfill
**Photo Number:** 08 **Date:** March 25, 2008
**Direction:** East **Photographer:** Tim Smith
**Subject:** Soil sampling location from underneath spilled glass from a failed container in the west area

# APPENDIX B

# LABORATORY ANALYTICAL REPORT AND DATA VALIDATION REPORT

DATA CHEM LABORATORIES, INC.

Submitted To: Tim Smith
Weston Solutions, Inc.
714 E Monument St.
Dayton, OH 45402

| Reference Data: | **TCLP Metals** |
|---|---|
| Client Sample No.: | SLF-S-01-032508 through SLF-G-02-032508 |
| P.O. No.: | Not Available |
| Sample Location: | Skinner Landfill |
| Sample Type: | Soil/Leachate |
| Method Reference: | 1311/3010A/6010B |
| DCL Set ID No.: | 08-S-1305 |
| DCL Sample ID No.: | 08-06877 through 08-06880 |
| Sample Receipt Date: | 3/25/2008 |
| Preparation Date: | 3/26-27/2008 |
| Analysis Date: | 3/27,28/2008 |

The samples were extracted in accordance with EPA method 1311 and digested in accordance with EPA method 3010A. The samples were then analyzed in accordance with EPA method 6010B using a trace ICP.

Sample condition was acceptable upon receipt except where noted.

The results are provided in the enclosed data table. Results relate only to the items tested and are not blank corrected unless indicated in the data table.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Kelly Hagen
Analyst

Reviewer

CINCINNATI OFFICE
4388 GLENDALE-MILFORD ROAD
CINCINNATI, OHIO 45242-3706
513 733-5336, FAX 513 733-5347

WEST COAST OFFICE
11 SANTA YORMA COURT
NOVATO, CALIFORNIA 94945
800 280-8071, FAX 415 893-9469

# TCLP Results
## mg/L (ppm)

| **Client #** | SLF-S-01-032508 | SLF-S-02-032508 | | | | |
|---|---|---|---|---|---|---|
| **DCL #** | 08-06877 | 08-06878 | | | | **RPL** |
| Arsenic | ND | ND | | | | **0.10** |
| Barium | **0.82** | **0.60** | | | | **0.10** |
| Cadmium | ND | ND | | | | **0.10** |
| Chromium | ND | ND | | | | **0.10** |
| Lead | ND | **0.34** | | | | **0.10** |
| Selenium | ND | ND | | | | **0.10** |
| Silver | ND | ND | | | | **0.10** |

ND = not detected at or above the reporting limit (RPL).

# TCLP QC Results
## mg/L (ppm)

| **Client #** | | % Recovery | % Recovery | % Recovery | | |
|---|---|---|---|---|---|---|
| **DCL #** | Lab Blank | LCS | 08-06877MS | 08-06877MSD | | **RPL** |
| Arsenic | ND | 117. | 100. | 99. | | **0.10** |
| Barium | ND | 115. | 94. | 93. | | **0.10** |
| Cadmium | ND | 110. | 88. | 87. | | **0.10** |
| Chromium | ND | 109. | 87. | 87. | | **0.10** |
| Lead | ND | 107. | 90. | 89. | | **0.10** |
| Selenium | ND | 122. | 100. | 99. | | **0.10** |
| Silver | ND | 105. | 96. | 96. | | **0.10** |

ND = not detected at or above the reporting limit (RPL).
LCS = laboratory control sample.
MS/MSD = matrix spike/matrix spike duplicate.

Kelly Hagen
Analyst

Reviewer

# TCLP Results
## mg/L (ppm)

| Client # | SLF-G-01-032508 | SLF-G-02-032508 | | | | |
|---|---|---|---|---|---|---|
| DCL # | 08-06879 | 08-06880 | | | | RPL |
| Arsenic | ND | ND | | | | 0.10 |
| Barium | **9.6** | **6.8** | | | | 0.10 |
| Cadmium | ND | ND | | | | 0.10 |
| Chromium | ND | ND | | | | 0.10 |
| Lead | **400** | **240** | | | | 0.10 |
| Selenium | ND | ND | | | | 0.10 |
| Silver | ND | ND | | | | 0.10 |

ND = not detected at or above the reporting limit (RPL).

# TCLP QC Results
## mg/L (ppm)

| Client # | | % Recovery | % Recovery | % Recovery | | |
|---|---|---|---|---|---|---|
| DCL # | Lab Blank | LCS | 08-06879MS | 08-06879MSD | | RPL |
| Arsenic | ND | 112. | 99. | 99. | | 0.10 |
| Barium | ND | 96. | *54. | *61. | | 0.10 |
| Cadmium | ND | 98. | 91. | 91. | | 0.10 |
| Chromium | ND | 95. | 90. | 90. | | 0.10 |
| Lead | ND | 98. | NA | NA | | 0.10 |
| Selenium | ND | 119. | 98. | 98. | | 0.10 |
| Silver | ND | 99. | 94. | 93. | | 0.10 |

ND = not detected at or above the reporting limit (RPL).
LCS = laboratory control sample.
MS/MSD = matrix spike/matrix spike duplicate.
NA = Due to spiked sample containing greater than four times the spiking amount the MS/MSD for lead the analyte can not be determined.
*Note: Low MS/MSD recoveries for barium possibly due to matrix effect.

Kelly Hagen
Analyst

Reviewer

**Cooler Receipt Worksheet** (Revised 10/23/01) **Page** 4 **of** 4

Set I.D.: 1395 Date/Time of Receipt: 3/25/08 14:24

Client Name: Weston Solutions

Cooler Temperature: 16.3 °C

Receipt Clerk: Steve Wilson

☐ pH Criteria not Met
☐ Cooler Temperature Out of Range
☐ Chain of Custody Error
☐ Tubes/Filters Broken
☐ Insufficient Sample Volume
☐ Missing Paperwork
☐ Incorrect Preservation
☐ Broken/Leaking Samples
☐ Incorrect Bottle Type
☐ Headspace in Volatile Bottles
☐ Unable to segregate volatile samples during storage due to sample container submitted
☐ Other:_____

| PH Check: | | Value |
|---|---|---|
| Metals | Yes /No /NA | <2 3 4 5 6 7 8 9 10 11 >12 |
| Cyanide | Yes /No /NA | <2 3 4 5 6 7 8 9 10 11 >12 |
| Ammonia | Yes /No /NA | <2 3 4 5 6 7 8 9 10 11 >12 |
| Total Phenolics | Yes /No /NA | <2 3 4 5 6 7 8 9 10 11 >12 |
| TPH (418.1) | Yes /No /NA | <2 3 4 5 6 7 8 9 10 11 >12 |
| Oil & Grease (413.1) | Yes /No /NA | <2 3 4 5 6 7 8 9 10 11 >12 |
| 8260/8020/8021/8015 | Yes /No /NA | <2 3 4 5 6 7 8 9 10 11 >12 |
| Other:_____ | Yes /No /NA | <2 3 4 5 6 7 8 9 10 11 >12 |

☒ Samples arrived at laboratory directly from the field.

Comments:_____

Client Contact:_____ Company:_____

Date:_____ Time:_____

CH DATA CHEM LABORATORIES, INC. 08-93-1305

# DataChem Laboratories
## Field Chain-of-Custody Record

Page 1 of 1

Cooler Temp: _____ (Lab only)

07730

| Client Contact Name & Address: | PO Number: | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WESTON SOLUTIONS, INC.<br>714 E MONUMENT ST.<br>DAYTON, OH 45402<br>Phone: 937 367 7475<br>Fax: 937.531.4401<br>Billing Address (*If different than above*): | Project No.: | | | | | | | | | | | | | | | | | | | | |
| | Project Name: SKINNER LAND FILL | | | | | | | | | | | | | | | | | | | | |
| | Sampler: (*Signature*) | | | | | | | | | | | | | | | | | | | | |
| Lab Number | Sample ID | Date | Time | | Preservation | Sample Type | TOTAL METALS (PB) | TCLP METALS | | | | | | | | | | | | No. of Containers |
| 06877 | SLF-S-01-032508 | 3/25/08 | 1138 | | 1 | S | X | X | | | | | | | | | | | | |
| 06878 | SLF-S-02-032508 | | 1142 | | 1 | S | X | X | | | | | | | | | | | | |
| 06879 | SLF-G-01-032508 | | 1200 | | 1 | S | | X | | | | | | | | | | | | |
| 06880 | SLF-G-02-032508 | | 1215 | | 1 | S | | X | | | | | | | | | | | | |
| TB | LAST ITEM | | | | | | | | | | | | | | | | | | | X |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Notes: EMAIL RESULTS TO: TIM.SMITH@WESTONSOLUTIONS.COM STANDARD TAT

| Relinquished by: (*Signature*) | Time / Date | Received by: (*Signature*) | Time / Date |
|---|---|---|---|
| | 3/25/08 | Steve Miller | 3/25/08 14:24 |
| Relinquished by: (*Signature*) | Time / Date | Received by: (*Signature*) | Time / Date |
| Relinquished by: (*Signature*) | Time / Date | Received by: (*Signature*) | Time / Date |

Ship to: **DataChem Laboratories**
4388 Glendale - Milford Road
Cincinnati, Ohio 45242
Phone: 513.733.5336
Fax: 513.733.5347

Carrier / Airbill #

Date / Time:

DATA CHEM LABORATORIES, INC.

Submitted To: Tim Smith
Weston Solutions, Inc.
714 E Monument St.
Dayton, OH 45402

| Reference Data: | **Lead** |
|---|---|
| Client Sample No.: | SLF-S-01-032508 through SLF-S-02-032508 |
| P.O. No.: | Not Available |
| Sample Location: | Skinner Landfill |
| Sample Type: | Soil |
| Method Reference: | 3050B/6010B |
| DCL Set ID No.: | 08-S-1305 |
| DCL Sample ID No.: | 08-06877 through 08-06878 |
| Sample Receipt Date: | 3/25/2008 |
| Preparation Date: | 3/26/2008 |
| Analysis Date: | 3/27/2008 |

The samples were prepared in accordance with EPA method 3050B. Sample condition was acceptable upon receipt except where noted. The samples were then analyzed in accordance with EPA method 6010B using a trace ICP.

The results are provided in the enclosed data table. Results relate only to the items tested and are not blank corrected unless indicated in the data table.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Kelly Hagen
Analyst

Reviewer

CINCINNATI OFFICE
4388 GLENDALE-MILFORD ROAD
CINCINNATI, OHIO 45242-3706
513 733-5336, FAX 513 733-5347

WEST COAST OFFICE
11 SANTA YORMA COURT
NOVATO, CALIFORNIA 94945
800 280-8071, FAX 415 893-9469

# Results
## mg/Kg (ppm)

| Client # | DCL # | Lead |
|---|---|---|
| SLF-S-01-032508 | 08-06877 | **10** |
| SLF-S-02-032508 | 08-06878 | **180** |
| | | |
| | Prep Blank | ND |
| % Recovery | LCS | 98. |
| % Recovery | 08-06877 MS | 83. |
| % Recovery | 08-06877 MSD | 87. |
| | | |
| **RPL** | | **5.0** |

ND = not detected at or above the reporting limit (RPL).
LCS = laboratory control sample.
MS/MSD = matrix spike/matrix spike duplicate.

Kelly Hagen
Analyst

Reviewer

**Cooler Receipt Worksheet** (Revised 10/23/01) **Page** 3 **of** 3

Set I.D.: 1305 Date/Time of Receipt: 3/25/08 14:24

Client Name: Weston Solutions

Cooler Temperature: 16.3 °C

Receipt Clerk: Steve Wilson

☐ pH Criteria not Met
☐ Cooler Temperature Out of Range
☐ Chain of Custody Error
☐ Tubes/Filters Broken
☐ Insufficient Sample Volume
☐ Missing Paperwork
☐ Incorrect Preservation
☐ Broken/Leaking Samples
☐ Incorrect Bottle Type
☐ Headspace in Volatile Bottles
☐ Unable to segregate volatile samples during storage due to sample container submitted
☐ Other:_____

| PH Check: | | Value | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals | Yes /No /NA | <2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | >12 |
| Cyanide | Yes /No /NA | <2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | >12 |
| Ammonia | Yes /No /NA | <2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | >12 |
| Total Phenolics | Yes /No /NA | <2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | >12 |
| TPH (418.1) | Yes /No /NA | <2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | >12 |
| Oil & Grease (413.1) | Yes /No /NA | <2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | >12 |
| 8260/8020/8021/8015 | Yes /No /NA | <2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | >12 |
| Other:_____ | Yes /No /NA | <2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | >12 |

☒ Samples arrived at laboratory directly from the field.

Comments:_____

Client Contact:_____ Company:_____

Date:_____ Time:_____

DATA CHEM LABORATORIES, INC.

# DataChem Laboratories
## Field Chain-of-Custody Record

Page 1 of 1

Cooler Temp: _____ (Lab only)

Rush only pm Tim 3/25/08

| Client Contact Name & Address: | PO Number: | Preservation | Sample Type | Analysis Requested | | | | | | | | | No. of Containers |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WESTON SOLUTIONS, INC.<br>714 E MONUMENT ST.<br>DAYTON, OH 45402<br>Phone: 937 367 7475<br>Fax: 937.531.4401<br>Billing Address (*if different than above*): | Project No.:<br>Project Name: SKINNER LAND FILL<br>Sampler: (*Signature*) T J Smith | NONE/# OF CURES | | TOTAL METALS (CPL) | TCLP METALS | | | | | | | | |
| Sample Number | Site ID | Date | Time | Lab Sample Number | | | | | | | | | |
| | SLF-S-01-032508 | 3/25/08 | 1138 | | 1 | S | X | X | | | | | |
| | SLF-S-02-032508 | | 1142 | | 1 | S | X | X | | | | | |
| | SLF-G-01-032508 | | 1200 | | 1 | S | | X | | | | | |
| | SLF-G-02-032508 | | 1215 | | 1 | S | | X | | | | | |
| TB | LAST ITEM | | | | | | | | | | | | 2 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Notes: EMAIL RESULTS TO: TIM.SMITH@WESTONSOLUTIONS.COM STANDARD TAT

| Relinquished by: (*Signature*) | Time / Date | Received by: (*Signature*) | Time / Date |
|---|---|---|---|
| T J Smith | 3/25/08 | Steve Miller | 3/25/08 14:24 |
| | | | |
| | | | |

Ship to: **DataChem Laboratories**
4388 Glendale - Milford Road
Cincinnati, Ohio 45242
Phone: 513.733.5336
Fax: 513.733.5347

Carrier / Airbill #

Date / Time:

**SKINNER LANDFILL SITE**
**WEST CHESTER, OHIO**
**DATA VALIDATION REPORT**

**Date:** April 2, 2008
**Laboratory:** DataChem Laboratories, Inc. (DataChem), Cincinnati, Ohio
**Laboratory Work Order #:** 08-S-1305
**Data Validation Performed By:** Lisa Graczyk, Dynamac Corporation (Dynamac), subcontractor to Weston Solutions, Inc. (Weston)
**Weston Analytical Work Order #/TDD #:** 20405.016.001.0399.00/S05-0001-0803-006

This data validation report has been prepared by Dynamac, a Weston subcontractor, under the START III Region V contract. This report documents the data validation of two soil and two glass samples collected for the Skinner Landfill Site that were analyzed for total lead and Toxicity Characteristic Leaching Procedure (TCLP) Metals using U.S. Environmental Protection Agency (EPA) SW-846 methods 6010B, 7471A, and 1311.

A level II data package was requested from DataChem. The data validation was conducted in general accordance with the U.S. EPA "Contract Laboratory Program National Functional Guidance for Inorganic Data Review" dated October 2004. The attachment contains the results summary report from the laboratory and hand-written qualifiers applied during data validation.

## TOTAL LEAD AND TCLP METALS BY U.S. EPA SW-846 METHODS 6010B, 7470A, AND 1311

### 1. Samples

The following table summarizes the samples for which this data validation is being conducted.

| Sample Identification | Lab Identification | Analytical Parameters | Date Collected | Date Analyzed |
|---|---|---|---|---|
| SLF-S-01-032508 | 08-06877 | Total Lead and TCLP Metals | 3/25/2008 | 03/27/2008 – 03/28/2008 |
| SLF-S-02-032508 | 08-06878 | Total Lead and TCLP Metals | 3/25/2008 | 03/27/2008 – 03/28/2008 |
| SLF-G-01-032508 | 08-06879 | TCLP Metals | 3/25/2008 | 03/27/2008 – 03/28/2008 |
| SLF-G-02-032508 | 08-06880 | TCLP Metals | 3/25/2008 | 03/27/2008 – 03/28/2008 |

## 2. Holding Times

The samples were analyzed within the holding time limit of 28 days from sample collection for mercury analysis and 180 days from sample collection for all other metals analyses.

## 3. Blank Results

The laboratory blanks analyzed with the samples were free of target contamination above the reporting limit.

## 4. Laboratory Control Sample (LCS) Results

The LCS recoveries were within the laboratory-established quality control (QC) limits.

## 5. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results

DataChem analyzed two MS/MSD pairs utilizing samples from the Skinner Landfill Site as the spiked samples. All MS and MSD recoveries were within the QC limits except for as follows. The MS and MSD recoveries using sample SLF-G-01-032508 (a glass sample) had a low percent recovery for TCLP barium. The results for TCLP barium in the two glass samples were flagged "J" as estimated for this discrepancy.

## 6. Overall Assessment

The metals data are acceptable for use as qualified based on the information received.

Data Validation Report
Skinner Landfill Site
DataChem Laboratories, Inc.
Work Order #: 08-S-1305

# ATTACHMENT

# DATACHEM LABORATORIES, INC.
# RESULTS SUMMARIES WITH QUALIFIERS

# Results
## mg/Kg (ppm)

| Client # | DCL # | Lead |
|---|---|---|
| SLF-S-01-032508 | 08-06877 | **10** |
| SLF-S-02-032508 | 08-06878 | **180** |
| | | |
| | Prep Blank | ND |
| % Recovery | LCS | 98. |
| % Recovery | 08-06877 MS | 83. |
| % Recovery | 08-06877 MSD | 87. |
| | | |
| **RPL** | | **5.0** |

ND = not detected at or above the reporting limit (RPL).
LCS = laboratory control sample.
MS/MSD = matrix spike/matrix spike duplicate.

Kelly Hagen
Analyst

Reviewer

# TCLP Results
## mg/L (ppm)

| Client # | SLF-S-01-032508 | SLF-S-02-032508 | | | | |
|---|---|---|---|---|---|---|
| DCL # | 08-06877 | 08-06878 | | | | RPL |
| Arsenic | ND | ND | | | | 0.10 |
| Barium | **0.82** | **0.60** | | | | 0.10 |
| Cadmium | ND | ND | | | | 0.10 |
| Chromium | ND | ND | | | | 0.10 |
| Lead | ND | **0.34** | | | | 0.10 |
| Selenium | ND | ND | | | | 0.10 |
| Silver | ND | ND | | | | 0.10 |

ND = not detected at or above the reporting limit (RPL).

# TCLP QC Results
## mg/L (ppm)

| Client # | | % Recovery | % Recovery | % Recovery | | |
|---|---|---|---|---|---|---|
| DCL # | Lab Blank | LCS | 08-06877MS | 08-06877MSD | | RPL |
| Arsenic | ND | 117. | 100. | 99. | | 0.10 |
| Barium | ND | 115. | 94. | 93. | | 0.10 |
| Cadmium | ND | 110. | 88. | 87. | | 0.10 |
| Chromium | ND | 109. | 87. | 87. | | 0.10 |
| Lead | ND | 107. | 90. | 89. | | 0.10 |
| Selenium | ND | 122. | 100. | 99. | | 0.10 |
| Silver | ND | 105. | 96. | 96. | | 0.10 |

ND = not detected at or above the reporting limit (RPL).
LCS = laboratory control sample.
MS/MSD = matrix spike/matrix spike duplicate.

Kelly Hagen
Analyst

Reviewer

# TCLP Results
## mg/L (ppm)

| Client # | SLF-G-01-032508 | SLF-G-02-032508 | | | | |
|---|---|---|---|---|---|---|
| DCL # | 08-06879 | 08-06880 | | | | RPL |
| Arsenic | ND | ND | | | | 0.10 |
| Barium | 9.6 J | 6.8 J | | | | 0.10 |
| Cadmium | ND | ND | | | | 0.10 |
| Chromium | ND | ND | | | | 0.10 |
| Lead | 400 | 240 | | | | 0.10 |
| Selenium | ND | ND | | | | 0.10 |
| Silver | ND | ND | | | | 0.10 |

ND = not detected at or above the reporting limit (RPL).

# TCLP QC Results
## mg/L (ppm)

LD
4/2/08

| Client # | | % Recovery | % Recovery | % Recovery | | |
|---|---|---|---|---|---|---|
| DCL # | Lab Blank | LCS | 08-06879MS | 08-06879MSD | | RPL |
| Arsenic | ND | 112. | 99. | 99. | | 0.10 |
| Barium | ND | 96. | *54. | *61. | | 0.10 |
| Cadmium | ND | 98. | 91. | 91. | | 0.10 |
| Chromium | ND | 95. | 90. | 90. | | 0.10 |
| Lead | ND | 98. | NA | NA | | 0.10 |
| Selenium | ND | 119. | 98. | 98. | | 0.10 |
| Silver | ND | 99. | 94. | 93. | | 0.10 |

ND = not detected at or above the reporting limit (RPL).
LCS = laboratory control sample.
MS/MSD = matrix spike/matrix spike duplicate.
NA = Due to spiked sample containing greater than four times the spiking amount the MS/MSD for lead the analyte can not be determined.
*Note: Low MS/MSD recoveries for barium possibly due to matrix effect.

Kelly Hagen
Analyst

Reviewer

# Mercury Results
# TCLP Fluid 1

| Client # | DCL # | ppm (mg/L) |
|---|---|---|
| SLF-G-01-032508 | 08-06879 | ND |
| SLF-G-02-032508 | 08-06880 | ND |
| | | |
| | Prep Blank | ND |
| % Recovery | LCS/TCLP fluid 1 | 100. |
| % Recovery | 08-06798 MS | 103. |
| % Recovery | 08-06798 MSD | 102. |
| | | |
| **RPL** | | **0.0005** |

ND = not detected at or above the reporting limit (RPL).
LCS = laboratory control sample.
MS/MSD = matrix spike/matrix spike duplicate.

# Mercury Results
# TCLP Fluid 2

| Client # | DCL # | ppm (mg/L) |
|---|---|---|
| SLF-S-01-032508 | 08-06877 | ND |
| SLF-S-02-032508 | 08-06878 | ND |
| | | |
| | Prep Blank | ND |
| % Recovery | LCS/TCLP fluid 2 | 100. |
| % Recovery | 08-06878 MS | 103. |
| % Recovery | 08-06878 MSD | 100. |
| | | |
| **RPL** | | **0.0005** |

ND = not detected at or above the reporting limit (RPL).
LCS = laboratory control sample.
MS/MSD = matrix spike/matrix spike duplicate.

Stephanie Wilcox
Analyst

Reviewer